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Applicant : Jeremy Wertheimer and Carl G. DeMarcken  
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Art Unit : 3623  
Examiner : Robinson Boyce, Akiba K

**MAIL STOP APPEAL BRIEF – PATENTS**

Commissioner for Patents  
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APPEAL BRIEF ON BEHALF OF

JEREMY WERTHEIMER AND CARL G. DEMARCKEN.

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**(i.) Real Party In Interest**

The real party in interest in the above application is ITA Software, Inc.

**(ii.) Related Appeals and Interferences**

The appellant is not aware of any appeals or interferences related to the above-identified patent application.

**(iii.) Status of Claims**

The claims have been twice rejected. Claims 1-30 and 32 are the subject of this appeal.

**(iv.) Status of Amendments**

All amendments have been entered.

Appellant filed a Notice of Appeal on **January 7, 2005**. Appellant filed an Appeal Brief therewith. The Office in response to the Appeal Brief issued an office action dated April 12, 2005 to which Appellant responded. The examiner then issued a final action of November 4, 2005. Appellant filed a new Notice of Appeal on February 2, 2006 in response to the action of November 4. No reply to that action was filed.

**(v.) Summary of Claimed Subject Matter**

**Background**

The claimed invention relates to processes that determine airline seat availability information. [Specification page 1, lines 3-5]

Airlines institute selling policies that can change to meet supply and demand considerations to maximize profit on any given flight. In order to issue a ticket for a single or multi-flight segment itinerary, a seat for each flight segment must be available. This is commonly referred to in the industry as determining airline "seat availability" or "availability." Availability is governed by whether an airline has available seats on flight segments and whether characteristics of the passenger correspond to a situation where the airline can maximize profit.

For instance, common characteristics include whether the passenger is willing to pay for the ticket or using a credit, whether the passenger is using other flights on that airline, whether the passenger is a frequent flyer, asking for round-trip passage, and so forth. [Specification page 1, lines 6-19]

Generally, before booking a flight and issuing a ticket, the seller sends a request for seat availability information to the airline. In general, a request for seat availability information is sent over a computer network to an airline and is processed in the airline's computer system. An answer to the request is provided from the system, typically in the form of a message that includes one or possibly a plurality of so-called booking codes that are labels used to designate different prices that an airline is willing to sell tickets at. [Specification page 1, lines 20-29]

### Appellant's Invention

#### Claim 1

One aspect of Appellant's invention is set out in claim 1 as a system for providing availability answers for seating on an airline flight, the system. Appellant's FIG. 1 shows a competitive availability prediction system 10. "The competitive availability prediction system includes a filter 12 to filter queries received by the system 10. The filter 12 includes rules that allow the filter 12 to pass through those queries that correspond to flights supported by a user of the competitive availability system 10, as well as selected competitors of that user. The competitive availability system 10 produces a prediction of the availability of a seat on a competitor's flight or flights, to determine how a competitor or competitors may respond to an availability request. The user of the competitive availability system 10 can decide whether and how to adjust its response from the availability system 74." [Specification page 3, line 24 to page 4 line 4]

The inventive features of claim 1 include an availability predictor "14" [Fig. 1, availability predictor 14, specification page 4, lines 9-10] that produces a predicted answer for seating availability on a competitive flight to the airline flight [Specification page 4, lines 17-20]

an availability system that produces an actual availability answer for the airline flight [Fig. 1 availability system 16 specification pages 3-5] and a computing system that includes decision

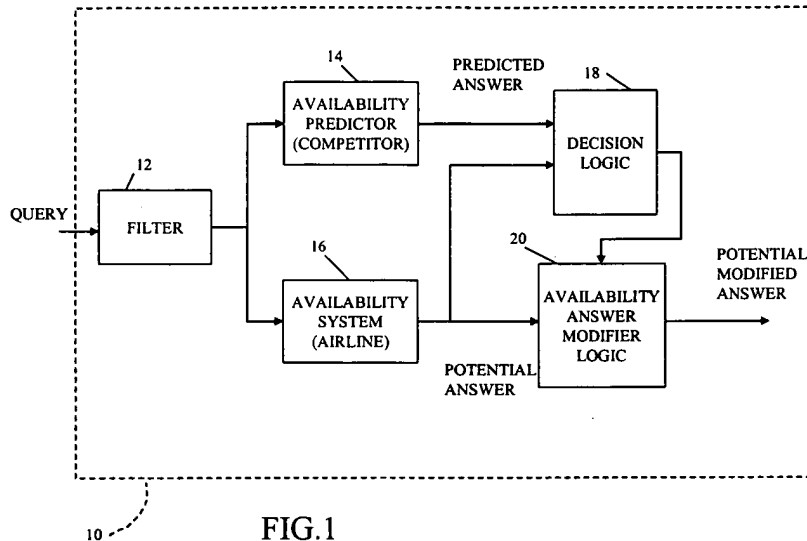


FIG.1

logic [Fig. 1 decision logic 18, specification page, 4 lines 25-29] to produce a decision with respect to the actual availability answer from the availability system based on comparing the predicted answer from the availability predictor and the actual availability answer from the availability system.

In the typical case, the user of the competitive availability system 10 is an airline that desires to modify its actual availability response to an availability query that it receives based on how it predicts a competitor airline might respond to a similar query [Specification page 4, lines 5-9]. The filtered queries provided from filter 12 are fed to one or more availability predictors generally denoted as 14 [Specification page 4, line 11]. The availability predictors 14 are provided for each competitor, for which the user of the competitive availability system 10 desires to compare airline availability responses [Specification page 4, lines 12-14].

The filtered queries are fed to the actual availability system 16 of the airline that owns or uses the competitive availability system 10 [Specification page 4, lines 19-21]. The availability

predictor 14 and the availability system 16 produce answers, [Specification page 4, lines 20-21], a predicted answer for the competitor and a potential availability answer for the user of the competitive availability system 10. [Specification page 4, lines 22-24] These answers are fed to decision logic 18. [Specification page, 4 lines 25] The decision logic 18 compares the answers to determine whether or not the actual answer that will be provided from the user's availability system 16 should be modified to take into consideration the relative competitive position of the competitor as represented by the predicted answer. [Specification page 4, lines 25-29]

FIG. 2A shows a process 30 incorporating decision logic 18' and modification logic 20 that is used in the system of FIG. 1. [Specification page 5, lines 21-23] The process 30 receives 32 the predicted and potential, actual responses from the availability predictor 14 and the availability system 16 respectively. The process 30 compares 34 the predicted and potential, actual responses to arrive at a decision whether to bias a modification towards making a seat more available or less available, or to remain neutral. [Specification page 5, lines 25-29] The process 30 modifies 36 the potential, actual availability response based upon the comparison and returns 38 the potential, actual availability response or a modified actual availability response to the entity that issued the query in the first instance. [Specification page 5, line 29 to page 6 line 1].

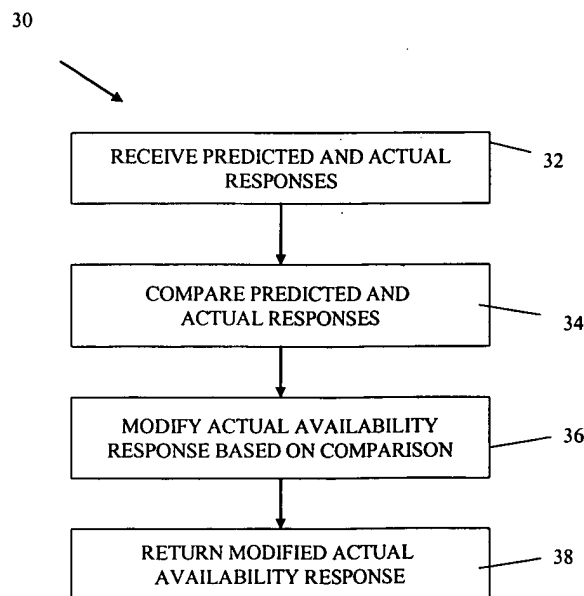


FIG. 2A

### Claim 17

Another aspect of the invention is covered by claim 17. Claim 17 is directed to a method executed on a computer system of predicting relative, competitive availability of seating on an airline flight. [Appellant's FIG. 1 shows a competitive availability prediction system 10 including a computer system to predict relative competitive availability.] Included in claim 17 is the feature of receiving by the computer system a request for availability of seating on an airline flight and executing in the computer system an algorithm to produce a predicted answer that predicts seating availability on a flight that is a competitive flight to the airline flight; [Specification page 4, lines 5-9]. Claim 17 also includes determining in the computer system an actual availability answer for the airline flight [Specification page 4, lines 22-24] and comparing the predicted answer from the algorithm and the actual availability answer from the availability system to establish a decision with respect to the actual availability answer. [Specification page 4, lines 25-29].

### Claim 21

Another aspect of the invention is covered by claim 21. Claim 21 is directed to a computer program product residing on a computer readable medium for determining relative availability of seating on an airline flight. The product includes instructions for causing a computing device [Appellant's FIG. 1 shows a competitive availability prediction system 10 including a computer system to predict relative competitive availability.] The instructions produce an actual availability answer for a flight [Specification page 4, lines 22-24] determine a predicted answer for seating availability on a competitor's flight that is a competitive flight to the airline flight [Specification page, 4 lines 9-10]. The instructions compare the predicted answer and the actual availability answer to determine if the actual seat availability answer should be modified [Specification page 4, lines 25-29] and modify the actual availability answer if indicated by the compare instructions [Specification page 5, lines 21-32].

### Claim 33

Another aspect of the invention is covered by claim 33. Claim 21 is directed to a computer program product residing on a computer readable medium for determining relative

availability of seating on an airline flight, the product comprising instructions. This is generally supported by the analogous feature of claim 21. The product includes instructions to determine a predicted answer for seating availability on a competitor's flight that is a competitive flight to an airline flight. This is generally supported by the analogous feature of claim 1. The product also includes instructions to compare the predicted answer and an actual availability answer to determine if the actual seat availability answer should be modified. This is generally supported by the analogous feature of claim 21. The product also includes instructions to modify the actual availability answer in accordance with the compare instructions. This is generally supported by the analogous feature of claim 21.

**(vi.) Grounds of Rejection to be Reviewed on Appeal**

(1) Claims 1-11, 16-29, 33 and 36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dilks et al (US 3,622,995), in further view of Walker et al. (US 6,112,185).

(2) Claims 4, 10, 11, 20, 24, 29, 35 and 37 are rejected under 35 U.S.C. 103(a) as being obvious over Dilks et al (US 3,622,995), in further view of Walker (US 6,112,185).

(3) Claims 12, 13, and 30 are rejected under 35 U.S.C. 103(a) as being obvious over Dilks et al (US 3,622,995), in further view of Walker (US 6,112,185), and in further view of Lynch et al (US 6.1 19,094).

(4) Claims 14, 15, and 32 are rejected under 35 U.S.C. 103(a) as being obvious over Dilks et al (US 3,622,995), in further view of Walker (US 6,112,185), and in further view of Walker et al (US 5,897,620).

**(vii.) Argument**

**Obviousness**

"It is well established that the burden is on the PTO to establish a prima facie showing of obviousness, *In re Fritsch*, 972 F.2d. 1260, 23 U.S.P.Q.2d 1780 (C.C.P.A., 1972)."

"It is well established that there must be some logical reason apparent from the evidence or record to justify combination or modification of references. *In re Regal*, 526 F.2d 1399 188,

U.S.P.Q.2d 136 (C.C.P.A. 1975). In addition, even if all of the elements of claims are disclosed in various prior art references, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill in the art would have been prompted to combine the teachings of the references to arrive at the claimed invention. *Id.* Even if the cited references show the various elements suggested by the Examiner in order to support a conclusion that it would have been obvious to combine the cited references, the references must either expressly or impliedly suggest the claimed combination or the Examiner must present a convincing line of reasoning as to why one skilled in the art would have found the claimed invention obvious in light of the teachings of the references. *Ex Parte Clapp*, 227 U.S.P.Q.2d 972, 973 (Board. Pat. App. & Inf. 985)."

"The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Although the Commissioner suggests that [the structure in the primary prior art reference] could readily be modified to form the [claimed] structure, "[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Laskowski*, 10 U.S.P.Q. 2d 1397, 1398 (Fed. Cir. 1989).

"The claimed invention must be considered as a whole, and the question is whether there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination." *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 488 (Fed. Cir. 1984).

Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under Section 103, teachings of references can be combined only if there is some suggestion or incentive to do so. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984) (emphasis in original, footnotes omitted).



"The critical inquiry is whether 'there is something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination.'" *Fromson v. Advance Offset Plate, Inc.*, 225 U.S.P.Q. 26, 31 (Fed. Cir. 1985).

**(1) Claims 1-11, 16-29, 33 and 36 are patentable  
over Dilks et al and Walker et al '185.**

Claims 1, 17 and 21

For the purpose of this appeal only claims 1, 17 and 21 stand or fall together. Claim 1 is representative of this group of claims.

Claim 1 calls for a system for providing availability answers for seating on an airline flight. Claim 1 includes the features of an availability predictor that produces a predicted answer for seating availability on a competitive flight ... and an availability system that produces an actual availability answer for the airline flight. Claim 1 also requires ... decision logic to produce a decision with respect to the actual availability answer from the availability system based on comparing the predicted answer from the availability predictor and the actual availability answer from the availability system.

The Board is invited to review the Examiner's characterization of Dilks. Essentially, the examiner takes the position that Dilks discloses all of the features of claim 1, but for the flights being competitive, for which the examiner relies on Walker et al.

Appellant contends that Dilks does not disclose any of the features of claim 1. The examiner states that: "Dilks et al discloses: an availability predictor ... (Col. 10, lines 20-22) as: "the means responsive to a request for a reservation for identifying reservation information, for an accommodation through a code." [Final Action pages 2-3] This language is a partial quote from an element of claim 1 of Dilks. The language does not describe or suggest an availability predictor. The examiner also references col. 12, lines 65-67, to support the availability predictor feature: "where it is shown that an accommodation is an available seat on a flight." [Final Action page 3] However, lines 65-67 do not appear in Col. 12 of Dilks. In Col. 10, lines 23-26, the examiner contends that "providing reservation information in response to a request for a

future accommodation or reservation,” [Final Action page 3] is taught. This teaching has nothing whatsoever to do with an availability predictor, as recited in claim 1.

The examiner contends that: “An availability system that produces an actual availability response for a flight/receiving by the computer system an actual availability response for a flight/produce a potential, actual availability response for a flight, is shown at col. 10, lines 17-19) for providing information about actual reservations for accommodations stored in the system.” This teaching is not an availability system.

The examiner contends that the feature of “a computing system ... is taught at (Col. 9, lines 26-33 system is logic-controlled, w/ Col. 10, lines 26-28, comparing reservation code with stored reservations, where granting the reserved accommodation represents the decision).” Dilks does not teach the features of the decision logic. Rather, Dilks teaches automated on-line check-in of numbered reservations. Availability answers for seat availability are not reservations. Again, this teaching has no relevance to the features of claim 1.

Appellant contends that Dilks is directed to an automated check-in ticketing system. The examiner has completely misconstrued the teachings of Dilks and Appellant's claim 1. The examiner fails to give plain meaning to terms used in the reference and the claims.

In construing features of claim 1 such as “availability predictor” as “the means responsive to a request for a reservation for identifying reservation information, for an accommodation through a code,” the Examiner ignores guidance from the Federal Circuit such as in *In re Morris*<sup>1</sup> which stands for the proposition that while the Office is entitled to construe claim terms using their “broadest reasonable meaning,” the Examiner must apply the Court's guidance on what “reasonable” means:

“Since it would be unreasonable for the PTO to ignore any interpretive guidance afforded by the applicant's written description, either phrasing connotes the same notion: as an initial matter, the PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, *taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written*

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<sup>1</sup> *In re Morris*, 127 F.3d 1048 (Fed. Cir. 1997).

*description* contained in the applicant's specification." [emphasis supplied]

According to *Morris*, the examiner must apply the broadest reasonable meaning "in their ordinary usage as they would be understood by one of ordinary skill in the art." The examiner has not provided any basis upon which one of ordinary skill in the art would construe an availability predictor to be "the means responsive to a request for a reservation for identifying reservation information, for an accommodation through a code." Moreover, in *Morris*, the specification lacked any text to guide the Examiner in construing what the disputed claim term meant. Based on the absence of any such text, the Court stated that the Examiner's interpretation was reasonable:

"Absent an express definition in their specification, the fact that appellants can point to definitions or usages that conform to their interpretation does not make the PTO's definition unreasonable when the PTO can point to other sources that support its interpretation."

In the present application, the written description discusses the availability predictors in great detail. There is no ambiguity, as there was in *Morris*. Nevertheless, the examiner, by construing availability predictors with a totally unrelated concept, improperly ignores Appellant's specification and the meaning given to those terms by the art.

Appellant does not ask the examiner to read limitations into the claims as was the case in *In re Van Geuns*<sup>2</sup>. In *Van Geuns*, the specification disclosed a magnet assembly used for NMR. The claim, however, recited a magnet assembly that provided a uniform magnetic field, with no mention of NMR. The cited reference disclosed a magnet assembly that generated a relatively uniform field. *Van Geuns* is inapplicable to the present case, because the claim element "availability predictor" is expressly defined in the specification and positively recited in the claim. This is not a case in which the claim recites a "predictor" and the Examiner is being asked to import the specification's description of an "availability predictor" to mean "predictor." Rather, this is a case in which the claim recites a particular feature and the examiner must find

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<sup>2</sup> *In re Van Geuns*, 988 F.2d 1181 (Fed. Cir. 1993).

that feature in the prior art and not conflate it with a totally non-relevant teaching from a non-relevant reference. So the specification is available to the examiner to help her understand what an “availability predictor” is.

Thus, it is well established that in construing a claim term, the Examiner may properly review the specification. In the present case, the Examiner is attempting to construe “availability predictor” without the benefit of the guidance offered by Appellant’s specification. In rejecting such guidance, the Examiner has been cast adrift, so much so that she now confuses an “availability predictor” with “the means responsive to a request for a reservation for identifying reservation information, for an accommodation through a code.”

Walker et al does not cure the deficiencies Dilks. Walker merely discloses that airlines may have competitors and have information that should be secured from competitors. Walker does not have any notion of “competitive flights” and the combination of Walker et al. with Dilks does not suggest “competitive flights.”

Walker describes a conventional RMS system that allocates inventory to a special fare listing. Walker, like Dilks neither describes nor suggests ... an availability predictor that produces a predicted answer for seating availability on a competitive flight ... and an availability system that produces an actual availability answer for the airline flight. Walker, like Dilks also neither describes nor suggests decision logic to produce a decision with respect to the actual availability answer from the availability system based on comparing the predicted answer from the availability predictor and the actual availability answer from the availability system, as recited in claim 1.

#### Claims 2, 18 and 22

For the purpose of this appeal only claims 2, 18 and 22 stand or fall together. Claim 2 is representative of this group of claims.

Claim 2 recites that the instructions to compare, bias the potential actual availability response based upon a relative competitive position of the competitor according to the predicted answer. The examiner contends Dilks in Col. 9 lines 57-64 shows this feature. Dilks discusses that the system can respond to a reservation change request and can determine if a new

accommodation is available. Appellant does not understand how this teaching has any relevance to any feature of claim 2. It is clear that Dilks does not predict an answer, nor does Dilks bias anything based on a determination of how a competitor might respond.

Claims 3, 19 and 23

For the purposes of this appeal only, claims 3, 19 and 23 may be treated as standing or falling together. Claim 3 is representative of these claims.

Claim 3 includes the feature of modifying logic that is responsive to the actual availability answer from the availability system and from the bias from the decision logic to modify the actual availability answer in accordance with the bias. The examiner contends that Dilks teaches this feature (at Col 9, lines 65-67) by printing a ticket. This teaching of Dilks again is of absolutely no relevance to the claim.

Appellant contends that in view of the examiner's use of Dilks and the argument made by the examiner, that the examiner appears to ignore the limitations of these claims and subsequent claims. It is unreasonable for the examiner to ignore limitations and improper to do so without apprising Appellant of the legal basis on which she feels empowered to ignore the claim limitations.

Claim 4

Claim 4 recites that the decision logic determines whether the prediction from the availability predictor indicates that a competitor corresponding to the availability predictor is in a more favorable or less favorable competitive position than a position corresponding to the actual availability answer produced by the availability system. The examiner does not specifically address this claim in this rejection. Appellant contends that like the claims discussed above, the examiner cannot find this limitation in the cited art and has improperly chosen to ignore the limitation.

Claim 5-9 and 25-28

Each of claims 5-9 and 25-28 serve to further distinguish over Dilks and Walker. In the interest of brevity, Appellant will address these claims together.

Claim 5, like claims 6-9 in this group depend from claim 1. Each of the claims recite states or outcomes of the decision logic and/or the effect that outcome has on the actual availability answer. As discussed above, the examiner has not shown the feature of the decision logic is taught by any combination of the references. Therefore none of the features of these claims can be suggested by the references. Similarly, claims 25-28 are allowable over the references.

Claim 33

Claim 33 is directed to a computer program product that includes instructions to determine a predicted answer for seating availability on a competitor's flight that is a competitive flight to an airline flight. Dilks fails to disclose any concept of prediction or the concept of a competitor's flight. Dilks also fails to disclose instructions to compare the predicted answer and an actual availability answer to determine if the actual seat availability answer should be modified. Dilks, which deals with reservations, is well beyond the stage of processing where seat availability is typically determined, e.g., when booking or at least searching for travel options. Dilks fails to disclose any instructions that modify the actual availability answer in accordance with the compare instructions.

Claim 36

Claim 36 is allowable over the references for analogous reasons as given in the discussion of claims 5-9.

**(2) Claims 4, 10, 11, 20, 24, 29, 35 and 37 are allowable over Dilks et al. and Walker (US 6,112,185).**

Claim 4, 10, 11, 20, 24, 29, 35 and 37

For the purposes of this appeal only, claims 4, 10, 11, 20, 24, 29, 35 and 37 may be treated as standing or falling together. Claim 10 is representative of this group. Appellant notes that the examiner applied the same art in this rejection of this set of claims as was applied to the first rejection above.

Claim 10 depends from claim 6 and recites that a value of the state depends upon the relative competitive position of the competitor represented by the availability predictor.

This (competitive position) is a common theme of this group of claims. The examiner admits that Dilks, et al fails to disclose the features of these claims (See Final Action pages 7-8), the examiner states that: "but [Dilks] does disclose a reservation system having means for storing a plurality of different numbered reservations for accommodations to be provided in col. 3, lines 70-73."

The examiner uses Walker et al '185 to teach these features and concludes that: "It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to disclose the above limitations with the motivation of indicating the level of competition that exists."

Dilks purported teaching of: "a reservation system having means for storing a plurality of different numbered reservations for accommodations" is of absolutely no import to the claimed invention, as discussed above.

The Examiner's characterization of what Walker '185 discloses is likewise incorrect and of no relevance to these claims. Walker does not disclose an availability predictor. Walker does not predict anything regarding "seating availability" and clearly does not suggest to predict "seating availability on a competitive flight." Rather, Walker describes a conventional revenue management system (RMS) used by airlines to allocate the number of seats booked at full fares, and suggests a mechanism to modify the RMS system to accommodate offer acceptance rules" (column 6, lines 60-61). The RMS system mentioned in Walker allocates "actual" seats, and is completely dependent on (whether based on prediction or otherwise) on data derived from actual bookings. As Walker '185 describes (column 6, line 64 to column 7 line 7):

**An RMS performs seat inventory control by periodically adjusting nested booking limits ("buckets") for the various fare classes, in order to optimize the passenger mix and thereby maximize the generated revenue. In alternate embodiments, the offer acceptance rules may be generated manually, or by a yield management system, a profit management system, or any system that controls and manages inventory. As previously indicated, the illustrative offer acceptance rules accept the highest offers for each upgrade offer item, to the extent of availability, provided that each offer exceeds a seller-defined minimum price.**

Contrary to the contentions of the Examiner, Walker (column 8, lines 22-25) states:

**It is noted that the offer rules contain sensitive information, including price flexibility, which, if known to an airline's competitors or customers, could dramatically impact the airline's overall revenue structure.**

However, the complete cite for this teaching reveals that it neither describes nor suggests, nor is even relevant to "an availability predictor that predicts seating availability on a competitive flight," as recited in claim 1 nor any of the features of claim 4. Rather, this passage teaches that the modification of the RMS system must be secured from competitors, not that Walker teaches any system to predict what a competitor might do as can clearly be observed by one of ordinary skill in reading Walker '185 Col. 8, lines 25-34, reproduced below:

**It is noted that the offer rules contain sensitive information, including price flexibility, which, if known to an airline's competitors or customers, could dramatically impact the airline's overall revenue structure. Thus, according to a feature of the present invention, the offer rules are preferably securely stored by the airline central controller 200, if necessary, to prevent one airline 130 from accessing, obtaining or altering the offer rules of another airline 130. In one embodiment, the airline central controller 200 utilizes computer security techniques, such as database access control mechanisms. In this manner, the integrity and confidentiality of the offer rules are maintained in the potentially hostile computing environment.**

Walker does not appreciate the problem that appellants seek to solve namely to determine seat availability of a competitor's without always making actual queries to the competitor's availability system, e.g., revenue management system (RMS). The recognition of an unrecognized problem militates in favor of patentability.

The Examiner's motivation to combine Dilks with Walker is inadequate. The examiner urges that the motivation is for "indicating the level of competition that exists." However, neither reference is concerned with "indicating a level of competition that exists." Recall that Dilks is directed to an automated check-in system. Presumably for an automated check-in system, one already has a ticket and thus there is no need to ascertain "the level of competition that exists." Walker on the other hand is directed to a technique to allow a holder of a reservation to bid an upgrade for a confirmed reservation. However, that upgrade is predicated on whether the upgrade period has expired and accessing the current inventory as expressed in



the flights database and the reservations database (See Col. 11). Walker does not predicate the upgrade process on "the level of competition that exists."

The motivation of "the level of competition that exists" appears to be derived from and motivated by review of Appellants claims and is an improper application of hindsight by the examiner.

**(3) Claims 12, 13, and 30 are allowable over  
Dilks, Walker ('185), and Lynch et al ('094)**

Claim 12 recites that if the decision logic determines that the competitor's available booking codes are not at a lower price, then the system can return a bias towards making the seat unavailable.

The examiner contends that Lynch 094 discloses this feature at Col. 8, lines 27-32. This is incorrect. Lynch 094 discusses at that passage:

**System 10 also identifies which travel arrangements are within the business entity's fare class restrictions. Thus, for example, if a company restricts airline travel to business or coach class seats, system 10 will not consider any available first class seats when identifying alternate low-cost travel arrangements.**

Neither in that passage nor elsewhere does Lynch describe or suggest decision logic that determines aspects of a competitor's available booking codes or determining what price the available booking codes are at. Lynch neither describes nor suggests any system that returns a bias towards making the seat unavailable. Rather in the cited passage Lynch identifies particular travel arrangements of a business entity with that entity's fare class restrictions.

**(4) Claims 14, 15, and 32 are allowable over  
Dilks, Walker ('185) and Walker et al ('620).**

Claim 14 recites that the ... decision logic determines that the competitor's available booking codes are at a lower price than those being offered by the user of the system, the system returns a bias towards making the seat available. Logically, if Claims 12, 13, and 30 were indeed unpatentable over Dilks, Walker ('185), and Lynch et al ('094), as in the rejection above, it

would logically follow that the same combination of references would also describe or suggest the subject matter recited in claim 14, namely, that if the ... decision logic determines that the competitor's available booking codes are at a lower price ... , the system returns a bias towards making the seat available.

The examiner appears to admit that is not the case and uses Dilks, Walker ('185) and Walker et al ('620) to formulate a rejection. While Appellant contends that neither combination of references suggests this set of claims or the set of claims in the rejection above. The examiner contends that:

Walker et al '620 discloses the feature at by "... the system receives a travel planning query, and if the decision logic determines that the competitor's available booking codes are at a lower price than those being offered by the user of the system, the system determines whether the travel planning query was for a high cost fare, and returns a bias towards making the seat available if for a high cost fare, ... (col. 9, lines 18-22, [correcting for competitor forces by increasing inventory {seats . . . i available}])). Walker et al '620 discloses this limitation in an analogous art for the purpose of showing that seats can be accommodated by adjusting the fare through a special fare listing).

Appellant contends that the examiner has picked that quote from Walker out of context. When read in context it is apparent that Walker describes adjustments to the RMS system for miscalculations in forecasted demand, but that Walker has absolutely no teachings relevant to ... decision logic that determines if the competitor's available booking codes are at a lower price than those being offered by the user of the system, the system returns a bias towards making the seat available. The "special fare listing" is for the distressed inventory class that is the subject of the invention discussed in Walker.

An airline 100 can correct for forecasting errors, or competitive forces which have produced unanticipated excess capacity 530 on a specific route by lowering its fare/class on the actual flights. In accordance with the present invention, the airline 100 can also correct for such forecasting errors by increasing the inventory allocated to the special fare listing at a lower fare/class than the currently available fare/class on the actual flights. Due to the discouraged use of unspecified-time tickets by full-fare business travelers, an airline 100 can sell such excess capacity at a discount, without undermining its existing published fare structure. Thus, in a preferred embodiment, the RMS 200 will periodically execute the process discussed below in conjunction with FIGS. 13a and 13b, to make unspecified-time tickets available for purchase by travelers.

FIG. 6 illustrates an exemplary forecasted demand analysis database 230, which records each selling price for each fare class for a given actual flight, and the forecasted demand at each selling price as established by the RMS 200. As previously indicated, when a flight is first added to the flight schedule database of an airline 100, a record of the initial price for each fare class and the forecasted demand is preferably established in the forecasted demand analysis database 230. In addition, new records are preferably created for each new selling price that is established for each fare class by the RMS 200, as part of the dynamic inventory reallocation process.

The examiner applies a "motivation of showing that seat availability can be accommodated." Appellant contends that this motivation is merely an application of hindsight, since the examiner has used Appellant's claim language and specification as a roadmap, in rejection of the claims. This follows because the examiner has failed to identify in the references any of the salient features of Appellant's claims. Rather, the examiner merely quotes Appellant's claim language and intermixes the claim language with completely unrelated passages from immaterial references, without presenting a cogent argument as to why the claim language is described or suggested by seemingly immaterial teachings that on their face do not address any of the features of the claims.

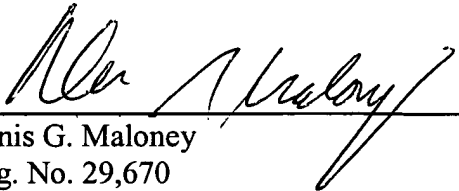
### Conclusion

Appellant submits, therefore, that Claims 1-30 and 32 are allowable over the cited art. Therefore, the Examiner erred in rejecting Appellant's claims and should be reversed.

Respectfully submitted,

Date: \_\_\_\_\_

3/30/06

  
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### **Appendix of Claims**

1. A system for providing availability answers for seating on an airline flight, the system comprises:

an availability predictor that produces a predicted answer for seating availability on a competitive flight to the airline flight;

an availability system that produces an actual availability answer for the airline flight;  
and

a computing system that includes decision logic to produce a decision with respect to the actual availability answer from the availability system based on comparing the predicted answer from the availability predictor and the actual availability answer from the availability system.

2. The system of claim 1 wherein the availability predictor predicts seating availability of the competitive flight of a competitor of an entity associated with the availability system, and the decision logic produces a bias that determines whether the actual availability answer from the availability system should be modified based upon a relative competitive position of the competitor to the entity associated with the availability system.

3. The system of claim 1 further comprising:  
modifying logic that is responsive to the actual availability answer from the availability system and from the bias from the decision logic to modify the actual availability answer in accordance with the bias.

4. The system of claim 1 wherein the decision logic determines whether the prediction from the availability predictor indicates that a competitor corresponding to the availability predictor is in a more favorable or less favorable competitive position than a position corresponding to the actual availability answer produced by the availability system.

5. The system of claim 1 wherein the actual availability answer is dependent on the decision from the decision logic.

6. The system of claim 1 wherein the decision from the decision logic has a plurality of states.

7. The system of claim 6 wherein one of the states is a neutral state that is does not tend to modify the answer received from the availability system.

8. The system of claim 6 wherein one of states biases the actual availability answer towards answering that a seat is available.

9. The system of claim 6 wherein one of states biases the actual availability answer towards answering that a seat is not available.

10. The system of claim 6 wherein a value of the state depends upon the relative competitive position of the competitor represented by the availability predictor.

11. The system of claim 3 wherein the decision logic, further comprises logic to determines whether the competitor's available booking codes are at a lower price than those that the availability system indicates the user of the system can offer.

12. The system of claim 11 wherein if the decision logic determines that the competitor's available booking codes are not at a lower price, then the system can return a bias towards making the seat unavailable.

13. The system of claim 12 wherein the system receives a travel planning query, and if the decision logic determines that the competitor's available booking codes are not at a lower

price, then the system tests whether the travel planning query was for a low cost fare and return a bias towards making the seat not available if the query was for a low cost fare.

14. The system of claim 11 wherein if the decision logic determines that the competitor's available booking codes are at a lower price than those being offered by the user of the system, the system returns a bias towards making the seat available.

15. The system of claim 11 wherein the system receives a travel planning query, and if the decision logic determines that the competitor's available booking codes are at a lower price than those being offered by the user of the system, the system determines whether the travel planning query was for a high cost fare, and returns a bias towards making the seat available if for a high cost fare.

16. The system of claim 1 wherein the decision returned changes the actual availability answer from the availability system.

17. (Currently Amended) A method executed on a computer system the method, comprises:

receiving by the computer system a request for availability of seating on an airline flight;  
executing in the computer system an algorithm to produce a predicted answer that predicts seating availability on a flight that is a competitive flight to the airline flight;  
determining in the computer system an actual availability answer for the airline flight;  
and

comparing the predicted answer from the algorithm and the the actual availability answer from the availability system to establish a decision with respect to the actual availability answer.

18. The method of claim 17 wherein comparing produces a decision that is a bias that determines whether the the actual availability answer should be modified based upon the relative

competitive position of the competitor represented by the availability predictor, before the actual availability answer is returned in response to the request.

19. The method of claim 17 further comprising:

modifying the actual availability answer in accordance with the bias.

20. The method of claim 17 further comprising:

determining whether the competitor's available booking codes are at a lower price than those which the availability system indicates the user of the system can offer.

21. A computer program product residing on a computer readable medium for determining relative availability of seating on an airline flight, comprises instructions for causing a computing device to:

produce an actual availability answer for a flight;

determine a predicted answer for seating availability on a competitor's flight that is a competitive flight to the airline flight;

compare the predicted answer and the actual availability answer to determine if the actual seat availability answer should be modified; and

modify the actual availability answer if indicated by the compare instructions.

22. The computer program product of claim 21 wherein the instructions to compare, biases the actual availability answer based upon a relative competitive position of the competitor according to the predicted answer.

23. The computer program product of claim 21 instructions to modify further comprising instructions to:

modify the actual availability answer in response to the predicted answer to produce the actual availability answer.

24. The computer program product of claim 21 wherein the instructions to compare comprise instructions to:

determine whether the predicted answer indicates that a competitor is in a more favorable or less favorable competitive position than the actual availability answer produced by the availability system.

25. The computer program product of claim 21 wherein comparing produces a decision with respect to the actual availability answer, the decision having a plurality of states.

26. The computer program product of claim 25 wherein the one of the states is a neutral state that is does not tend to modify the actual availability answer received from the availability system.

27. The computer program product of claim 25 wherein the one of states biases the actual availability answer towards producing the actual availability answer that a seat is available.

28. The computer program product of claim 25 wherein one of states biases the actual availability answer towards producing the actual answer that a seat is not available.

29. The computer program product of claim 21 wherein the instructions to compare determines whether the competitor's available booking codes are at a lower price than those that the user of the product can offer.

30. The computer program product of claim 29 wherein if the competitor's available booking codes are not at a lower price, then the instructions return a bias towards making the seat unavailable.



Claim 31 is canceled.

32. The computer program product of claim 29 wherein if the competitor's available booking codes are at a lower price than those being offered by the user of the program, the instructions return a bias towards making the seat available.

33. A computer program product residing on a computer readable medium for determining relative availability of seating on an airline flight, the product comprising instructions for causing a computing device to:

determine a predicted answer for seating availability on a competitor's flight that is a competitive flight to an airline flight;

compare the predicted answer and an actual availability answer to determine if the actual seat availability answer should be modified; and

modify the actual availability answer in accordance with the compare instructions.

34. The computer program product of claim 33 wherein the instructions to compare, bias the actual availability answer based upon a relative competitive position of the competitor according to the predicted answer.

35. The computer program product of claim 33 wherein the instructions to compare comprise instructions to:

determine whether the predicted answer indicates that a competitor is in a more favorable or less favorable competitive position than the actual availability answer produced by the availability system.

36. The computer program product of claim 33 wherein comparing produces a decision with respect to the actual availability answer, the decision having a plurality of states.

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37. The computer program product of claim 33 wherein the instructions to compare determines whether the competitor's available booking codes are at a lower price than those that the user of the product can offer.

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**Evidence Appendix**

**None**

**Related Proceedings Appendix**

**None**